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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,502	10/02/2000	Yoshio Hashibe	0694-134	4484

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EXAMINER

SERGEANT, RABON A

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 08/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/677,502

Applicant(s)

HASHIBE ET AL.

Examiner

Rabon Sergeant

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 June 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,6 and 8-12 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1,2,4,6 and 8-12 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

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1. Claims 11 and 12 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Support has not been provided for claiming that the film has an average reflectance of “about 15% for visible light” (claims 11 and 12). The specification only provides support for reflectance values for visible light of 15% or less (page 3) and 12% and 19% (Table 1). Since “about 15%” encompasses values that exceed 15%, the language encompasses values that are not supported by the specification. Data set forth within examples provides support only for values that correspond to the data. Therefore, the position is maintained that there is no evidence that applicants were in possession of values that exceed 15% at the time of invention, other than the experimental value of 19%.

2. Applicants’ response has been carefully considered; however, it is not seen that the response is adequate to remove the rejection. The examiner has presented his rationale indicating why support is believed to be lacking, and applicants have pointed to no disclosure or examples that set forth reflectance values that exceed 15%, as encompassed by the claimed language, “about 15%”.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1, 2, 4, 6, and 8-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Friedman et al. ('704) in view of Hentzelt et al. ('668) and further in view of Terneu et al. ('687), Plumat et al. ('978), Arfsten et al. ('578), Benson et al. ('154), and Stephens ('426).

Friedman et al. disclose the production of fire screening protective glazing laminates, wherein a layer of polymeric material, that corresponds to that of applicants, is sandwiched between layers of fireproof glass plates. Friedman et al. further disclose that the glass plates may be surface treated with materials that yield heat reflectance. See abstract; column 2, lines 30+; and column 6, lines 18-29, especially column 6, line 26.

5. Friedman et al. are silent with respect to the limitations of instant claim 8 and the surface treatments that may be applied to the glass; however, the use of double glazing, additional glass plating attached through an air layer, and infrared reflecting materials, such as metal doped oxides, were known to be useful for such specific applications as transparent fire-screening panels. This position is supported by the teachings of Hentzelt et al. See abstract; figures 2 and 3; and column 3, lines 5-47, especially lines 38-47, within Hentzelt et al. Furthermore, Terneu et al. also disclose the use of double glazing to enhance insulation characteristics of glass panels.

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See figures and column 6, line 11. Additionally, Terneu et al., Plumat et al., Arfsten et al., Benson et al., and Stephens serve to reinforce the teaching within Hentzelt et al. that doped metal oxides were well-known infrared reflecting glazing materials for glass at the time of invention.

See abstract within Terneu et al. See column 4, lines 17-40 within Plumat et al. See abstract within Arfsten et al. See column 2, lines 45-60 within Benson et al. See column 3, lines 43-60 within Stephens.

6. Therefore, the position is taken that one of ordinary skill in the art would have been motivated by the teachings of the secondary references, especially the teachings of Hentzelt et al., to modify the fire-screening laminates of the primary reference by employing the claimed doped metal oxides as a heat reflecting surface treatment (glazing), in accordance with the teachings of the primary reference, and by further employing such proven insulation techniques as double glazing and the use of an air barrier, so as to maximize the heat reflectance and fire protection characteristics of the resulting fire-screening glass laminates. The position is ultimately taken that applicants have simply employed well-known materials and techniques in accordance with the teachings of the relied-upon references, so as to arrive at the instant invention.

7. The examiner has considered applicants' arguments; however, the arguments fail to overcome the *prima facie* case of obviousness. Firstly, the position is taken that applicants have argued the teachings of the relied upon references separately, as opposed to appreciating or arguing the combined teachings of the references. Accordingly, applicants' arguments fail to appreciate the teachings of Friedman et al. and Hentzelt et al. as they apply to fire-screening panels, and further fail to appreciate the teachings of the remaining secondary references as one

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would apply their teachings in light of the disclosures of Friedman et al. and Hentzelt et al. Secondly, applicants have presented arguments that are not commensurate in scope with the claims. Specifically, applicants' reference to sputtering temperature is without merit as the claims are not so limited. Furthermore, applicants have argued that Hentzelt et al. teaches away from using an oxide layer without a metal layer and that applicants' "consisting essentially of" language excludes a metal layer; however, these arguments are without merit, because applicants' claims do not exclude a metal layer. While applicants specify a heat-ray reflection film that is characterized by "consisting essentially of" language, applicants' claims are open to the inclusion or presence of other layers or components given the use of the "comprising" language within line 2 of claims 1 and 9. Additionally, applicants have argued that Friedman et al. requires THV and have further argued that this polymer does not correspond to the polymers recited in the rejected claims. This argument is entirely without merit. Applicants' claims require nothing more than the resin being selected from fluorocarbon resin, and Friedman et al. clearly satisfy this requirement, because Friedman et al. clearly refer to fluoropolymer interlayer films. See line 2 of the abstract, for example. In summation, the position is maintained that Friedman et al. and Hentzelt et al. disclose fire-screening panels produced from such components as fluoropolymers and metal oxide layers and, in view of these teachings associated with fire-screening panels, one of ordinary skill would have been motivated to utilize these materials in the production of the claimed fire-protection glass product. Furthermore, given the disclosure of fire-screening panels of Friedman et al. and Hentzelt et al., it is not seen that applicants' claimed values or results amount to anything that would have been unobvious or unexpected.

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8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (571) 272-1079.

R. Sergent
August 20, 2006


RABON SERGENT
PRIMARY EXAMINER